

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029897**Date Inspected:** 29-Jul-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Jesus Cayabyab, Bernie Docena**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS Tower**Summary of Items Observed:**

Caltrans Quality Assurance Inspector (QA) Joe Adame arrived at the American Bridge/Fluor (ABF) job site between the times noted above in order to monitor ABF Quality Control functions and the in work being performed by ABF personnel. The following items were observed:

In Process Visual Inspection

RWR201305-009

ESW W-043, Location "V"-Face B

The QA Inspector observed, at random intervals, ABF/JV welder Mike Jimenez (WID-4671) performing weld repairs of the repair excavation on Electroslag Weld (ESW) "V", at face B locations noted as:

Y= 6200~7000mm

L= 800mm

W= 80mm

D= 70mm

Prior to the repair work, ABF Quality Control (QC) Inspector Bernie Docena performed an informational MT verification of the repair area to verify the weld was clear of any discontinuities. The welder was observed preheating the weld to over 300° Fahrenheit prior to welding using the Miller ProHeat 35 with heat induction blankets. The welder was using 4.0mm diameter electrode (E7018-MH4-R) per ABF Welding Procedure Specification (WPS) ABF-WPS-D15-1000-Repair Rev.3 for Shield Metal Arc Welding (SMAW). The welding parameters were verified by QC Inspector Bernie Docena throughout the day and appeared to be in compliance with the WPS noted above.

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NDT Inspection of Electroslag Welds (ESW)

RWR-201306-002

ESW E-043, Location "Q"- Face A, B:

QA performed Ultrasonic Testing (UT) on Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as ESW "Q" face A,B. Location –Excavation Y=5400mm~6700mm and additional HAZ areas from- 6700mm~7000mm, 5100mm~5400mm of this weld was inspected using this testing method.

QA/QC observed one 90mm long rejectable indication in the repair area @ 5800.

QA performed UT of the above mentioned ESW location in accordance with the ABF approved supplemental procedure for confirmation and evaluation of planar type defects. Tandem report for work performed on this date will be completed by QC Inspector Jesse Cayabyab and signed by both QA/QC parties. Items listed on tandem report reflect indications agreed upon by QA/QC. See TL-6027 for additional details on the items inspected on this date.

Investigative excavation

ESW E-045,"F"-Face A:

RWR201307-004

The QA Inspector was later present to observe ABF welder Simon Ma performing exploratory excavation of ESW "F" Face A @ Y-8790mm, 8960mm to verify indications observed during Ultrasonic Testing pulse/echo & pitch/catch. Mr. Ma was performing grinding on the excavation. ABF QC Inspector Jesse Cayayab stated that Mr. Ma will excavate every 3mm deep and allow QC/QA to inspect the excavation. Location of the repair is as follows:

Weld excavated at 16mm- Transverse indications removed @Y-8730, @Y-8760.

Weld excavated at 16mm-Linear indication (slag) @8840, X=-15, L= 4mm

Weld excavated at 19mm- Linear indication (slag) @8840 removed.

Weld excavated at 19mm- Linear indication (slag) @8740, X=-35, L= 3mm

Weld excavated at 20mm- Linear indication (slag) @8820, X=-15, L= 8mm

Weld excavated at 20mm- Linear indication (slag) @8740 remains

Excavation Length Y=8680mm~9090mm (Excavation work in progress to be continued on the next work shift)

After grinding to bright metal the QC Inspector performed MT testing of the excavation to inspect for weld discontinuities at each hold point. See TL-6028 for additional details on items inspected on this date.



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Summary of Conversations:

Only general conversations with ABF/JV QC NDT personnel relevant to work and testing performed during this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Adame,Joe	Quality Assurance Inspector
Reviewed By:	Mertz,Robert	QA Reviewer
